

REMARKS/ARGUMENTS

Claims 1-7, 10-14, and 24-27 are pending in the present application. Claims 1-7 and 10-14 are amended. Claims 8-9 and 15-23 are canceled. Claims 24-27 are added. No new matter has been added by the amendments to the claims. Support for the amendments and newly added claims may be found in the specification at least on page 7-8, page 16-18, and page 22-23. Applicants have amended some claims and canceled others solely to facilitate expeditious prosecution of this application. Applicants do not concede that the subject matter encompassed by the earlier presented claims is not patentable over the art cited by the Examiner. Applicants respectfully reserve the right to pursue the subject matter encompassed by the claims as presented prior to this amendment, as well as additional claims, in one or more continuing applications. Reconsideration of the claims is respectfully requested.

Applicants also corrected claims 6 and 11 in response to the Notice of Non-Compliant Amendment mailed on October 29, 2008 to reflect the editorial changes to the original set of claims for claims 6 and 11.

I. 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 6, 11-13, and 19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. Appropriate correction has been made to claims 6 and 11-13. Claim 19 is canceled. Thus, this rejection is respectfully traversed.

II. 35 U.S.C. § 101

The Examiner has rejected claims 22 and 23 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. Claims 22 and 23 are canceled. Thus, the rejection of claims 22 and 23 is moot and this rejection is respectfully traversed.

III. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1-7 and 11-23 under 35 U.S.C. § 103 as being unpatentable over Hassett et al. (US 6807558 B1), hereinafter referred to as *Hassett*, in view of Goodman et al. (U.S. 7020697), hereinafter referred to as *Goodman*. This rejection is respectfully traversed.

III.A. Independent Claim 1

Amended claim 1 is as follows:

1. (Currently Amended) A computer implemented method of automatically reloading a page on a client computing device, the computer implemented method comprising:
 - storing a page on a server;
 - transmitting a copy of the page to a browser of the client computing device in response to a request from said browser received at said server, said copy of the page being transmitted to the browser over a network connecting the client computing device to the server;
 - responsive to receiving a real-time notification that the server is updating the content of the page stored on the server, determining, by a message broker, whether a change message is to be communicated to the browser, based on a user selected list of network addresses for the client registered with the message broker, wherein the user selected list of network addresses comprises a plurality of network addresses of pages to be automatically maintained in an updated form; and
 - transmitting the change message to said browser in real-time, by the message broker, in response to the message broker determining that the network address of the page is registered in the list of network addresses for the client computing device, wherein the change message notifies the browser of a change in the content of the page, wherein said browser automatically requests a copy of the updated page.

As to Claim 1, the Examiner states:

- a. Hassett shows (claim 1) a method of automatically reloading a page on a client computing device (column 1, line 57-column 2, line 5: user receives updated information either in response to automatic polling by push client software or in response to sending immediate information updates by server), characterised in that it comprises the steps of storing a page on a server (column 2, lines 22-51: information server stores information items and advertisement); transmitting a copy of the page to a browser of the client computing device in response to a request from said browser received at said server, said copy of the page being transmitted to the browser over a network connecting the client computing device to the server (column 3, lines 6-20: request and retrieve information); updating the content of the page stored on the server (claim 1 and 7: receive distributive information, determining updated information; column 2, lines 22-51: information server updates information items and advertisement; column 5, lines 46-61: selected and edited news stories are stored); simultaneously transmitting a message to said browser notifying it of a change in the content of the page (column 1, line 57-column 2, line 5: sending immediate information updates). Hassett does not explicitly show on receipt of said change content message, causing said browser to automatically request a copy of the updated page. However, Hassett also shows (column 9, line 57-column 10, line 6) local information updated as necessary; (column 1, lines 33-44) local workstation information, files and/or advertising display refresh; (column 15, lines 4-14 and 40-44) click and provide additional information; (column 16, lines 47-67) only downloading news items corresponding to the subscriber's user profile; and (column 32, lines 15-23) prefetcher fetch.

- b. Goodman shows automatic requested information distribution synchronous or asynchronous push/pull services (column 110, line 33-column 111, line 4) in an analogous art for the purpose of architectures for netcentric computing systems.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Hassett's functions of utilizing information "push" technology with Goodman's functions of automatic information request and distribution.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to utilize Goodman's functions of automatic asynchronously or synchronously information updating as applied to publish/subscribe services as per Goodman (column 100, lines 46-59) and Hassett (column 1, line 57-column 2, line 5).

Office Action dated June 13, 2008, pages 4 and 5.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). The prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In determining obviousness, the scope and content of the prior art are... determined; differences between the prior art and the claims at issue are... ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006)).

III.A.i. The combination of the references, when considered as whole, fails to teach or suggest the feature “determining, by a message broker, whether a change message is to be communicated to the browser, based on a user selected list of network addresses for the client registered with the message broker,” as recited in claim 1.

Hassett is directed toward pushing information to clients. The Abstract of *Hassett* is as follows:

An apparatus and computer-implemented method for distributing information to a plurality of client devices on a network is disclosed. The computer-implemented method includes the steps of: 1) receiving a variety of information from a plurality of sources, 2) organizing the variety of information into information categories, and 3) distributing the variety of information to the plurality of client devices based on the information categories requested by the plurality of client devices. The invention further includes the steps of: 4) accepting user input at the client device to specify information categories for retrieval from a server, 5) generating a user profile based on the information categories specified by the user input, and 6) retrieving information at predetermined intervals from the server based on the user profile.

Here, *Hassett* teaches distributing information to a plurality of clients based on the information in categories requested by the client devices. The categories of *Hassett* are not network addresses. In addition, *Hassett* does not teach or suggest determining whether to send a change message based on a list of network addresses. Instead, *Hassett* distributes information based on the information categories. In fact, *Hassett* does not teach, suggest, or even mention a change message in this or any other section of the reference.

Thus, the proposed combination of the references fails to teach or suggest “responsive to receiving a real-time notification that the server is updating the content of the page stored on the server, determining, by a message broker, whether a change message is to be communicated to the browser, based on a user selected list of network addresses for the client registered with the message broker, wherein the user selected list of network addresses comprises a plurality of network addresses of pages to be automatically maintained in an updated form,” as in claim 1.

III.A.ii. The proposed combination of the references, when considered as a whole, fails to teach or suggest “transmitting the change message to said browser in real-time, by the message broker, in response to the message broker determining that the network address of the page is registered in the list of network addresses for the client computing device, wherein the change message notifies the browser of a change in the content of the page, wherein said browser automatically requests a copy of the updated page,” as in claim 1.

The Examiner cites to *Hassett* at column 1, line 57-column 2, line 5 which states:

In the PointCast Network, a user, employing locally installed push client software, subscribes to channels or topics of interest. Channels are information packaged in logical groupings. The user's expressed preferences are captured in a subscriber profile that can subsequently be changed as desired by the user. The system allows each user to customize the operation of his or her own push client, controlling the kind of information the client retrieves from the server and, within prescribed limits, the frequency of such refresh operations. Basically, after establishing a profile, the user receives updated information either in response to automatic polling of the content server at specified intervals by the push client software or in response to the server sending immediate information updates to client software that has been enabled for such frequent feeds of information.

Here, *Hassett* discloses a subscriber profile to capture the expressed preferences of the user. The user receives updated information in response to polling of the content server by the push client or in response to the server sending information updates to the client software. The polling method and the server sending information updates to the client does not teach or suggest a message broker transmitting a change message to a client computing device to notify the browser of a change in the content of a page and the browser automatically requesting a copy of the updated page. Instead, *Hassett* teaches the client polling the server for updated information. *Hassett* fails to mention any change messages or message brokers in this or any other section of the reference.

Another portion of *Hassett* cited to by the Examiner at column 9, line 57-column 10, line 6, is as follows:

The default connection schedule is for the subscriber's computer to initiate a connection to the information server once during the middle of the night (e.g., a randomly selected time between 11 p.m. and 7 a.m. local time) for an update," and once every four hours during the rest of the day for "news story updates." During the administrative update connection, the set of advertisements, scripts and images in the subscriber computer's local information database are updated as necessary, and any software upgrades are also downloaded onto the subscriber's computer. During both "administrative update" and "news story update" connections, the news stories in the subscriber computer's local information database are updated. At the option of the information server's system operator, script and/or software updates can be made during news story update" connections, especially when a malfunction has been detected in previously distributed scripts or software.

Again, *Hassett* describes a client initiating a connection to an information server at given time intervals, such as every four hours, to obtain information updates. *Hassett* does not connect to the server and request an update in response to a change message. As mentioned above, *Hassett* does not teach or suggest a change message or a message broker anywhere in the reference.

Goodman fails to make up for the deficiencies of *Hassett*. *Goodman* is directed towards netcentric computing systems. The Examiner cites to *Goodman* at column 110, line 33-column 111, line 4 which is as follows:

The first time a user requests a Web page, preferentially the web server 98 retrieves that page from the network and stores it temporarily in a cache (memory on the web server 98). When another page or the same page is requested, the web server 98 first checks to see if the page is available in the cache. If the page is available, then the web server 98 retrieves it from the cache, otherwise it retrieves it from the network. Clearly, the web server 98 can retrieve the page from the cache more quickly than retrieving the page again from its location out on the network. The web server 98 typically provides an option to verify whether the page has been updated since the time it was placed in the cache, and if it has to get the latest update.

The push/pull services 302 are applications that allow for interest in a particular piece of information to be registered and then changes or new information to be communicated to the subscriber list. Traditional Internet users "surf" the web by actively moving from one web page to another, manually searching for content they want and "pulling" it back to the desktop via a graphical browser. But using the push model, on which subscription servers are based, content providers can broadcast their information directly to individual users' desktops. The technology uses the Internet's strengths as a two-way conduit by allowing the user to specify the type of content they want to receive. Content providers then seek to package the requested information for automatic distribution to the user's personal computer.

Depending upon requirements, synchronous or asynchronous push/pull services may be required in the netcentric computing system 10. Synchronous push/pull services provide a mechanism for applications to be notified in real time if a subscribed item changes (e.g., stock ticker). Asynchronous push/pull services do not require that a session-like connection be present between the subscriber and the service or application providing information. Asynchronous push/pull services can be useful for pro-actively updating customers on changes in order status or delivering information on new products or services they have expressed an interest in.

Here, *Goodman* describes push/pull services that permit users to register interest in information. The information is pushed to the client or pulled down by the client. *Goodman* discloses sending registered information to the client by a push/pull service. However, *Goodman* does not teach or suggest a message broker, a change message, or transmitting a change message to a browser. Thus, *Hassett* and *Goodman*, when considered as a whole, fail to teach or suggest "transmitting the change message to said browser in real-time, by the message broker, in response to the message broker determining that the network address of the page is registered in the list of network addresses for the client computing device, wherein the change message

notifies the browser of a change in the content of the page, wherein said browser automatically requests a copy of the updated page,” as in claim 1.

III.B. Dependent claims 2-7 and 11-15

If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefore is also non-obvious by virtue of their dependency. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, at least by virtue of their dependency on claim 1, claims 2-7 and 11-15 are also not obvious over *Hassett* in view of *Goodman*.

III.C. Dependent claim 10

Claim 10 recites:

10. The computer implemented method of claim 1 wherein the user selected list of network addresses comprise a user selected subset of the browser bookmark list.

The Examiner acknowledges that *Hassett* and *Goodman* do not show the network addresses registered by the browser with the message broker agent/server comprise a bookmark list of the browser. However, the Examiner cites to *Reed* at column 3, line 64-column 4, line 28 which states:

Various computer-based systems have been created to provide mechanisms for communicating information. The Internet and World Wide Web provide a network of a large number of information sources, providing a voluminous amount of information. Computer programs exist which can be executed on Internet-connected computers to search these sources to obtain desired information. Additionally, through the medium of hypertext, providers of World Wide Web pages can create links in their pages between items of related information which can significantly aid consumers in finding desired information. However, the links to the information source are neither dynamic nor persistent; in the sense that they do not provide new or updated information once the consumer has found a topic of interest. "Bookmarks" in a web browser program can facilitate subsequent access to a particular web page to determine if new information is present. However, if the web page referenced by the bookmark is removed, the bookmark is no longer valid. Bookmark polling programs, such as Smart Bookmarks from First Floor, Inc., can also be used to determine whether a web page has changed since the last time the consumer viewed it. In addition, Smart Bookmarks can examine a changed page and automatically transfer to the consumer a text string embedded by the author of the page informing the consumer of the nature of the change. However, Smart Bookmarks' capability is limited to single text strings on single web pages. Therefore the consumer must locate and bookmark every Web page of interest. Smart Bookmarks does not provide a way for the consumer to filter the update messages, nor does it provide the consumer with any mechanism for exchanging structured information or managing a communications relationship with the provider.

Here, *Reed* discloses bookmarks in a web browser that may be used to access a particular web page. Bookmark polling programs can be used to determine whether a web page has

changed since the last time the consumer viewed it. However, *Reed* does not disclose a change message, a message broker, a subset of the browser bookmark list, or a message broker determining whether to send a change message to a client based on the subset of the browser bookmark list. Thus, the proposed combination of *Hassett*, *Goodman*, and *Reed* fails to teach or suggest the combination of features in claim 10.

III.D. The Examiner fails to present a *prima facie* case of obviousness because the Examiner has not stated a proper reason to combine the references.

Additionally, the Examiner failed to state a *prima facie* obviousness rejection against claim 1 because the Examiner failed to state a proper reason to combine the references under the standards of *KSR Int'l*. As shown above, *Hassett*, *Goodman*, and *Reed* simply do not teach or suggest what the Examiner believes these references to teach and suggest. Therefore, the reasoning provided by the Examiner to combine the references rests on inherently flawed reasoning. For this reason, the Examiner did not state a proper, rational reason to combine the references as required by *KSR Int'l*. Accordingly, the Examiner failed to state a *prima facie* obviousness rejection against claim 1 or any other claim in this grouping of claims.

III.E. The proposed modification of *Hassett* would not be made when *Hassett* is considered as a whole.

"It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Hedges*, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986). Thus, when *Hassett* is examined as a whole, *Hassett* teaches one of ordinary skill in the art to use automatic polling of the content server at specified intervals by the push client software or using a server to send information updates to client software that has been enabled for such frequent feeds of information. *Hassett* teaches that a client continuously polls the server or the server sends updates without regard to a user selected list of network addresses for pages to be updated automatically. Therefore, one of ordinary skill in the art would not be motivated to make the Examiner's proposed modifications to reach the presently claimed invention when *Hassett* is considered as a whole. Therefore, the rejection of claims 1-7 and 11-23 under 35 U.S.C. § 103 has been overcome.

IV. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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